



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

08/787,745 01/24/97 HOEFELICH

J 29124-009

QM32/1112
FAY, SHARPE, BEALL, FAGAN, MINNICH &
MCKEE
1100 SUPERIOR AVENUE, SUITE 700
CLEVELAND OH 44114-2518

EXAMINER

BLAU, S

ART UNIT

PAPER NUMBER

3711

DATE MAILED:

11/12/99

Please find below and/or attached an Office communication concerning this application or
proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/787,745

Applicant(s)
Hoefflich

Examiner
Stephen Blau

Group Art Unit
3711



☒ Responsive to communication(s) filed on Feb 2, 1999

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-3, 5-9, and 11-21 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-3, 5-9, and 11-21 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit:

DETAILED ACTION

Continued Prosecution Application

1. The request filed on 28 December 1998 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 08/787,745 is acceptable and a CPA has been established. An action on the CPA follows.

Drawings

2. The changes to the specification is agreed with and the objection to the drawings under 37 CFR 1.84(p)(4) is removed.

Specification

3. The changes to the specification are agreed with and the objections are removed.

Claim Rejections - 35 USC § 112

Art Unit:

4. The changes to claim 3 is agreed with and the rejection under 35 U.S.C. 112, second paragraph, is removed.

5. Claims 13-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 13 is indefinite in that it states the butt end diameter displaces the normal kick point. What is normal today may not be what is normal tomorrow. Claims 14-18 are rejected for depending on a rejected base claim.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-3 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akatsuka (5,437,450) in view of Huang.

Akatsuka discloses a shaft comprising a plurality of layers of fibers in a form of an inner, outer and reinforcement layers (Figure) imbedded in a synthetic resin in a form of a plastic

Art Unit:

material epoxy resin (Col. 4 Lns. 24-35, Col. 5 Lns. 1-7), a butt end of relatively larger cross sectional diameter (Col. 5 Lns. 62-68) tapering without intervening discontinuities to a tip end of relatively smaller diameter in a form of an outer diameter gradually increasing from one end adjacent to a tip end of a shaft to an other end adjacent to a grip end of a shaft (Col. 3 Lns. 56-60), a shaft length of 45 inches (Col. 7, Ln. 34), a tip end having an outside diameter adapted to be attached to a head in a form of a size of an inside diameter of 2-6 mm and wall thickness 1.2-3.2 mm (Col. 5 Lns. 62-68), a butt end having an outside diameter of from .490 inches in a form of an inside diameter of 11.5 mm and a wall thickness of .5 mm, and a butt end having a wall thickness of between .04 and .045 inches in a form of having a butt end wall thickness of .5-2.0 mm (Col. 5 Lns. 62-68). Clearly an artisan skilled in the art of making a shaft with the right butt size to fit players with smaller hands would have selected a suitable butt end outside diameter and thickness in which a diameter of about .460 inches and a wall thickness is between .04 and .045 inches are included.

The difference between the claims and Akatsuka is that Akatsuka does not disclose a butt end diameter as defined by the claims with a wall thickness of between .04 and .045 inches

Huang discloses that it is desired to have a profile of a grip and a shaft to assume the configuration corresponding to the size and shape of a golfer's hand in order to provide maximum comfort and enhance control over the club during play (Col. 6 Lns. 5-9).

In view of the patent of Huang it would have been obvious to modify a shaft of Akatsuka to have a butt end diameter as defined by the claims with a wall thickness of between .04 and

Art Unit:

.045 inches in order have a profile of a shaft to assume the configuration corresponding to the size and shape of a golfer's hand and still be stiff all of which will provide maximum comfort and enhance control over the club during play.

8. Claims 5, 7-9, 11 and 13-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akatsuka (5,437,450) in view of Huang as applied to claims 1-3 and 21 above, and further in view of Hogan.

Akatsuka discloses two inner layers of fibers in a form of two kinds of wound layers in an inner layer imbedded in epoxy and having fibers oriented at angles of +45 degrees and -45 degrees relative to an axis of a shaft (Col. 3 Lns. 64 through Col. 4 Ln. 35), a butt end having an outside diameter of from .400 to .560 inches in a form of an inside diameter of 11.5-14.5 mm and a wall thickness of .5-2.0 mm (Col. 5 Lns. 62-68), and a butt end diameter displacing the normal kick point in a form of Akatuka having a kickpoint much higher compared to the same shaft with a diameter of .6 inches.

The differences between the claims and Akatsuka are that Akatsuka does not disclose graphite fibers, a butt end comprising a substantially cylindrical cross section, a taper of an intermediate section being more significant than in a tip and butt section, and a tip end including parallel sidewalls. Hogan discloses shaft made with graphite fibers (Col. 3 Lns. 56-64), a butt end having a cylindrical cross section, a taper of an intermediate section being more significant than a tip and butt section, and a tip end including parallel sidewalls (Fig. 2). In view of the patent to

Art Unit:

Hogan it would have been obvious to have graphite fibers in order to have a stronger shaft. In addition, it would have been obvious to have to have a butt end, intermediate section, and a tip end as defined by the claims in order to have a lower kick point to obtain more elevation when hitting a ball for the same swing by having a stiffer butt end and a more flexible tip end.

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akatsuka (5,437,450) in view Huang as applied to claims 1-3 and 21 above, and further in view of Hogan and Akatsuka (5,156,396).

The differences between the claim and Akatsuka (5,437,450) are that Akatsuka (5,437,450) does not disclose an intermediate layer of graphite fibers embedded in epoxy and fibers being oriented longitudinal to an axis of a shaft. Akatsuka (5,156,396) discloses a shaft with an intermediate and outer layer embedded in epoxy and fiber being oriented longitudinal to an axis of a shaft (Figure, Col. 2 Lns. 60 through Col. 3 Ln. 11). In view of the patent to Akatsuka (5,156,396) it would have been obvious to modify the shaft of Akatsuka (5,437,450) to replace the outer layer with an intermediate layer as defined by the claims and an outer layer of Akatsuka (5,156,396) in order to have a shaft with more longitudinal stiffness. See paragraph 7 for elements previously rejected by Akatsuka (5,437, 450) in view of Hogan.

Art Unit:

10. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akatsuka (5,437,450) in view of Huang and Hogan as applied to claims 5, 7-9, 11 and 13-20 above, and further in view of Akatsuka (5,156,396).

See paragraph 9 for elements previously rejected by Akatsuka (5, 437,450) in view of Akatsuka (5,156,396).

Response to Arguments


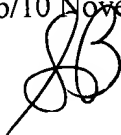
11. The argument with respect to the reference of Patterson noted on the Advisory Action is agreed with. The argument that it is improper to use the reference of Huang since Huang does not indicate narrowing a shaft diameter is disagreed with. There are many different sizes of butt ends for shafts. It is intuitive that one of the most important consideration for selecting a size of diameter of a butt end of a shaft is consideration with respect to the size of a player's hand. This is implied by the reference of Huang. In addition, Akatsuka discloses a diameter of .490 inches. It is uncertain how the applicant's shaft having a diameter of .460 inches will be any superior to a shaft of Akatsuka having a diameter of .490 inches.

Conclusion

Art Unit:

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Blau whose telephone number is (703) 308-2712. The examiner is available Monday through Friday from 8 a.m. to 4:30 p.m.. If the examiner is unavailable you can contact his supervisor Jeanette Chapman whose telephone number is (703) 308-1310. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0858.

slb/10 November 1999



JEANETTE CHAPMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700